



# SABRE Board for Smart Devices Based on the i.MX 6 Series

The Smart Application Blueprint for Rapid Engineering (SABRE) board for smart devices was created to simplify product design by offering a feature-rich development platform that allows developers to work with the majority of the i.MX 6 series processor's primary features.

It provides you with a low-cost development platform which includes all primary features of the processors and serves as an example for how to layout complex, high-speed interfaces such as DDR. The SABRE board for smart devices includes complete hardware design files and board support packages (BSP) for Android™, Linux® and FreeRTOS™\*.

SABRE boards enable designers to quickly get started with i.MX 6 series processors. The MCIMX6QP-SDB enables development on i.MX 6QuadPlus and i.MX 6DualPlus processors. The MCIMX6Q-SDB enables development on i.MX 6Quad and i.MX 6Dual processors. The MCIMX6SX-SDB enables development on i.MX 6SoloX processors. There are a number of accessory boards that work with the SABRE-SDB to provide additional capabilities such as multi-touch display and Wi-Fi® connectivity.

## SABRE BOARD FOR SMART DEVICES SYSTEM CONTENTS

- ▶ i.MX 6QuadPlus, 6Quad or 6SoloX processor-based system
- ▶ Power supply
- ▶ Quick Start Guide
- ▶ Bootable SD card

## SOFTWARE AND TOOLS

The SABRE board comes with an SD card pre-installed with the Android operating system (MCIMX6QP-SDB & MCIMX6Q-SDB) or the Linux operating system (MCIMX6SX-SDB). Additional third-party and proprietary software is available. In addition to optimized BSPs, we also provide a large portfolio of optimized video, speech and audio codecs are available.

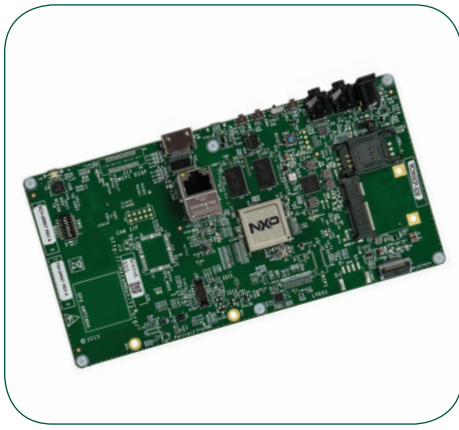
More information is available at [www.nxp.com/SABRESDB](http://www.nxp.com/SABRESDB).

Join fellow i.MX developers online at [www.imxcommunity.org](http://www.imxcommunity.org) — an active community of open source developers.

\* For ARM® Cortex®-M4 on i.MX 6SoloX applications processors



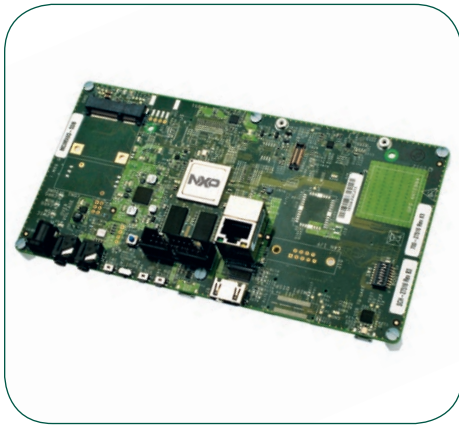
**FIGURE 1: MCIMX6QP-SDB**



**MCIMX6QP-SDB FEATURES**

<b>Processor</b>	<ul style="list-style-type: none"> <li>i.MX 6QuadPlus 1 GHz processor based on the ARM® Cortex®-A9 core</li> </ul>
<b>Development for</b>	<ul style="list-style-type: none"> <li>i.MX 6QuadPlus and i.MX 6DualPlus</li> </ul>
<b>Memory/Storage</b>	<ul style="list-style-type: none"> <li>1 GB DDR3 SDRAM up to 533 MHz (1066 MTPS) memory</li> <li>8 GB eMMC flash</li> </ul>
<b>Display</b>	<ul style="list-style-type: none"> <li>2 x LVDS connectors</li> <li>HDMI connector</li> <li>LCD expansion connector (parallel, 24-bit)</li> <li>MIPI DSI connector (two data lanes, 1 GHz each)</li> </ul>
<b>User Interface</b>	<ul style="list-style-type: none"> <li>Power, reset, volume buttons</li> </ul>
<b>Power Management</b>	<ul style="list-style-type: none"> <li>NXP MMPF0100F9</li> </ul>
<b>Audio</b>	<ul style="list-style-type: none"> <li>Audio codec</li> <li>Microphone and headphone jacks</li> </ul>
<b>Expansion Connector</b>	<ul style="list-style-type: none"> <li>Camera MIPI CSI port</li> <li>I<sup>2</sup>C, SSI, SPI signals</li> </ul>
<b>Connectivity</b>	<ul style="list-style-type: none"> <li>2 x Full-size SD/MMC card slots</li> <li>22-pin SATA connector</li> <li>10/100/1000 Ethernet port</li> <li>1 x USB 2.0 OTG port (micro USB)</li> <li>mPCIe® connector</li> </ul>
<b>Debug</b>	<ul style="list-style-type: none"> <li>JTAG connector (10-pin)</li> <li>1x Serial-to-USB connector (for JTAG)</li> </ul>
<b>OS Support</b>	<ul style="list-style-type: none"> <li>Linux® and Android™</li> <li>Others supported third party (QNX, Windows® Embedded)</li> </ul>
<b>Tools Support</b>	<ul style="list-style-type: none"> <li>Manufacturing Tool</li> <li>Processor Expert IOMUX tool</li> </ul>
<b>Additional Features</b>	<ul style="list-style-type: none"> <li>NXP MMA8451 three-axis accelerometer</li> <li>NXP MAG3110 three-axis magnetometer</li> <li>USB plug power supply</li> <li>NXP 3D magnetometer</li> </ul>

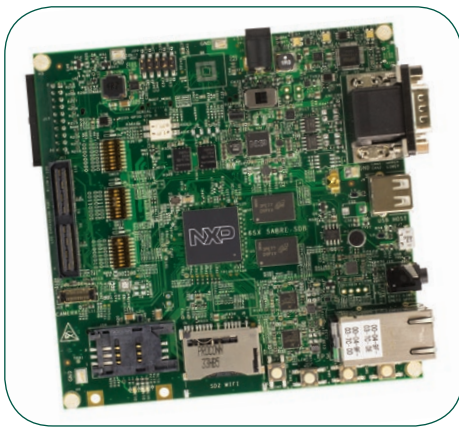
**FIGURE 2: MCIMX6Q-SDB**



**MCIMX6Q-SDB FEATURES**

<b>Processor</b>	<ul style="list-style-type: none"> <li>i.MX 6Quad 1 GHz processor based on the ARM® Cortex®-A9 core</li> </ul>
<b>Development for</b>	<ul style="list-style-type: none"> <li>i.MX 6Quad and i.MX 6Dual</li> </ul>
<b>Memory/Storage</b>	<ul style="list-style-type: none"> <li>1 GB DDR3 SDRAM up to 533 MHz (1066 MTPS) memory</li> <li>8 GB eMMC Flash</li> </ul>
<b>Display</b>	<ul style="list-style-type: none"> <li>2 x LVDS connectors</li> <li>HDMI connector</li> <li>LCD expansion connector (parallel, 24-bit)</li> <li>MIPI DSI connector (two data lanes, 1 GHz each)</li> </ul>
<b>User Interface</b>	<ul style="list-style-type: none"> <li>Power, reset, volume buttons</li> </ul>
<b>Power Management</b>	<ul style="list-style-type: none"> <li>NXP MMPF0100</li> </ul>
<b>Audio</b>	<ul style="list-style-type: none"> <li>Audio codec</li> <li>Microphone and headphone jacks</li> </ul>
<b>Expansion Connector</b>	<ul style="list-style-type: none"> <li>Camera MIPI CSI port</li> <li>I<sup>2</sup>C, SSI, SPI signals</li> </ul>
<b>Connectivity</b>	<ul style="list-style-type: none"> <li>2 x full-size SD/MMC card slots</li> <li>22-pin SATA connector</li> <li>10/100/1000 Ethernet port</li> <li>1 x USB 2.0 OTG port (micro USB)</li> <li>mPCIe® connector</li> </ul>
<b>Debug</b>	<ul style="list-style-type: none"> <li>JTAG connector (20-pin)</li> <li>1 x Serial-to-USB connector (for JTAG)</li> </ul>
<b>OS Support</b>	<ul style="list-style-type: none"> <li>Linux® and Android™</li> <li>Others supported third party (QNX, Windows® Embedded)</li> </ul>
<b>Tools Support</b>	<ul style="list-style-type: none"> <li>Manufacturing Tool</li> <li>Processor Expert IOMUX tool</li> </ul>
<b>Additional Features</b>	<ul style="list-style-type: none"> <li>NXP MMA8451 three-axis accelerometer</li> <li>NXP MAG3110 three-axis magnetometer</li> <li>USB plug power supply</li> <li>NXP 3D magnetometer</li> </ul>

**FIGURE 3: MCIMX6SX-SDB**



**MCIMX6SX-SDB FEATURES**

<b>Processor</b>	<ul style="list-style-type: none"> <li>i.MX 6SoloX 1 GHz processor based on the ARM® Cortex®-A9 core and 227 MHz Cortex-M4 core</li> </ul>
<b>Development for</b>	<ul style="list-style-type: none"> <li>i.MX 6SoloX</li> </ul>
<b>Memory/Storage</b>	<ul style="list-style-type: none"> <li>1 GB DDR3L SDRAM up to 400 MHz</li> <li>32 MB x 2 QSPI NOR flash</li> </ul>
<b>Display</b>	<ul style="list-style-type: none"> <li>LVDS connector</li> <li>LCD expansion connector (parallel, 24-bit)</li> </ul>
<b>User Interface</b>	<ul style="list-style-type: none"> <li>Buttons: Power (sw3), Reset (sw2), Function1, Function2</li> <li>Switch: power</li> </ul>
<b>Power Management</b>	<ul style="list-style-type: none"> <li>NXP MMPF0200</li> </ul>
<b>Audio</b>	<ul style="list-style-type: none"> <li>Audio codec</li> <li>Microphone and headphone jacks</li> <li>Board-mounted microphone</li> </ul>
<b>Expansion Connector</b>	<ul style="list-style-type: none"> <li>Parallel camera MIPI CSI port</li> <li>I<sup>2</sup>C and signals</li> </ul>
<b>Connectivity</b>	<ul style="list-style-type: none"> <li>Full-size SD/MMC card slots (3x)</li> <li>Two gigabit Ethernet connectors</li> <li>1 x USB 2.0 OTG port (micro USB)</li> <li>mPCIe® connector</li> <li>12-bit ADC connector</li> <li>2 x CAN (DB-9) using MC34901 CAN transceiver</li> </ul>
<b>Debug</b>	<ul style="list-style-type: none"> <li>JTAG connector (20-pin)</li> <li>1 x Serial-to-USB connector (for JTAG)</li> </ul>
<b>OS Support</b>	<ul style="list-style-type: none"> <li>Linux® and Android™, our proprietary MQX™ RTOS for ARM Cortex-M4</li> <li>Others supported via third party (QNX, Windows® Embedded)</li> </ul>
<b>Tools Support</b>	<ul style="list-style-type: none"> <li>Manufacturing tool</li> <li>Processor Expert IOMUX tool</li> </ul>
<b>Additional Features</b>	<ul style="list-style-type: none"> <li>MMA8451 three-axis accelerometer</li> <li>MAG3110 three-axis magnetometer</li> <li>Ambient light sensor</li> </ul>



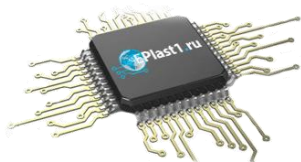
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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